

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 1-7, 9, 12, 14, and 15. Please amend claims 8, 10, 11, 13, and 16-19 as follows.

Listing of Claims

1-7. (Canceled)

8. (Currently Amended) A method for making float glass with reduced defect density comprising:

- a.——melting a glass composition to form a glass melt; and
- b.——pouring the glass melt in a float glass chamber ~~having a hot section and an cold~~

~~section, the boundary line between the hot section and the cold section is where the temperature of the glass falls below a threshold temperature,~~

~~wherein the hot section has an atmosphere in at least the lower plenum comprises less than 3 percent hydrogen based on volume, the float glass chamber comprising:~~

an upper plenum and a lower plenum, with a plurality of gas inlets and gas outlets in the upper plenum and lower plenum; and

a first chamber section and a second chamber section,

wherein the method further includes controlling an atmosphere in the lower plenum of the first chamber section to have 0 to 3 volume percent hydrogen and controlling an atmosphere in the lower plenum of the second chamber section to have 0 to 10 volume percent hydrogen, and defining a boundary between the first and second chamber sections to be where a temperature of molten glass in the float glass chamber falls below a threshold temperature of at least 1600°F, and wherein a temperature of the molten glass in the first chamber section is higher than the temperature of the molten glass in the second chamber section.

9. (Canceled)

10. (Currently Amended) A method according to claim 8 wherein the threshold temperature ~~of the float chamber is~~ at least 1800°F.

11. (Currently Amended) A method according to claim 8 wherein the threshold temperature ~~of the float chamber is~~ at least 2100°F.

12. (Canceled)

13. (Currently Amended) A method according to claim 8 wherein the glass melt has a water content equal to or greater than 0.035 weight percent based on the total weight percent of the composition.

14-15. (Canceled)

16. (Currently Amended) The method according to claim 8 including ~~A method for making float glass with reduced defect density comprising:~~
a. ~~melting a glass composition to form a glass melt; and~~
b. ~~pouring the glass melt into a float chamber having a hot section and an cold section, the boundary line between the hot section and the cold section is where the temperature of the glass falls below a threshold temperature;~~
c. ~~pumping a gas mixture comprising less than 3% hydrogen based on volume into at least the lower plenum of the hot~~ first ~~section.~~

17. (Currently Amended) A method according to claim ~~16~~ 8 ~~wherein the pumping comprises~~ including pumping a gas mixture comprising less than 1% hydrogen based on volume into at least the lower plenum of the ~~hot~~ first ~~section.~~

18. (Currently Amended) A method according to claim ~~16~~ 8 wherein the glass ~~composition-melt~~ comprises:

from 65 to 75 weight percent SiO₂;

from 10 to 20 weight percent Na₂O;

from 5 to 15 weight percent CaO;
from 0 to 5 weight percent MgO;
from 0 to 5 weight percent Al₂O₃;
from 0 to 5 weight percent K₂O; and
from 0 to 2 weight percent Fe₂O₃,
with weight percents being based on the total weight of the glass composition.

19. (Currently Amended) ~~A-~~The method according to claim ~~16-18~~ wherein the melting occurs in an oxy-fuel furnace.